

Combination Synopsis/Solicitation NNC13ZRH006Q  
Released on 12/12/2012

This notice is a combined synopsis/solicitation for commercial items prepared in accordance with the format in FAR Part 13 'Simplified Acquisition Procedures', as supplemented with additional information included in this notice. This announcement constitutes the only solicitation; offers are being requested and a written solicitation will not be issued.

This notice is being issued as a Request for Quote (RFQ) for two C-Band Solid State Power Amplifiers with the Option to purchase up to six additional such amplifiers.

The provisions and clauses in the RFQ are those in effect through FAC 2005-63.

The NAICS Code and the small business size standard for this procurement are 334220 and 750 employees. The offeror shall state in its offer their size status for this procurement.

All responsible sources may submit an offer which shall be considered by the agency.

Delivery to NASA Glenn Research Center (GRC) is required within 90 days ARO. Delivery shall be FOB Destination. Therefore all quoted unit prices shall incorporate shipping.

Offers for the items(s) described above are due by 01/18/2013 at 4:30 pm local GRC time to Jeffrey Hoyt at [Jeffrey.D.Hoyt@nasa.gov](mailto:Jeffrey.D.Hoyt@nasa.gov) and must include solicitation number, FOB destination to this Center, proposed delivery schedule, discount/payment terms, warranty duration (if applicable), taxpayer identification number (TIN), identification of any special commercial terms, and be signed by an authorized company representative. Offerors are encouraged to use the Standard Form 1449, Solicitation/Contract/Order for Commercial Items form found at URL:  
<http://server-mpo.arc.nasa.gov/Services/NEFS/NEFSHome.tml>

Offerors shall be registered in the System for Award Management (SAM) website at <https://www.sam.gov/portal/public/SAM/>.

Offerors shall provide the information required by FAR 52.212-1 (FEB 2012), Instructions to Offerors-Commercial Items, which is incorporated by reference.

If the end product(s) offered is other than domestic end product(s) as defined in the clause entitled "Buy American Act -- Supplies," the offeror shall so state and shall list the country of origin.

FAR 52.212-4 (FEB 2012), Contract Terms and Conditions-Commercial Items is applicable.

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FAR 52.212-5 (NOV 2012), Contract Terms and Conditions Required To Implement Statutes or Executive Orders-Commercial Items is applicable and the following identified clauses are incorporated by reference:

- 1) 52.204-10, Reporting Executive Compensation and First-Tier Subcontract Awards (Aug 2012)
- 2) 52.209-6, Protecting the Government's Interest When Subcontracting with Contractors Debarred, Suspended, or Proposed for Debarment. (Dec 2010)
- 3) 52.209-10, Prohibition on Contracting with Inverted Domestic Corporations (May 2012)
- 4) 52.219-4, Notice of Price Evaluation Preference for HUBZone Small Business Concerns (JAN 2011)
- 5) 52.219-28, Post Award Small Business Program Rerepresentation (Apr 2012)
- 6) 52.222-3, Convict Labor (June 2003)
- 7) 52.222-19, Child Labor—Cooperation with Authorities and Remedies (Mar 2012)
- 8) 52.222-21, Prohibition of Segregated Facilities (Feb 1999).
- 9) 52.222-26, Equal Opportunity (Mar 2007)
- 10) 52.222-35, Equal Opportunity for Veterans (Sep 2010)(38 U.S.C. 4212).
- 11) 52.222-36, Affirmative Action for Workers with Disabilities (Oct 2010)
- 12) 52.222-37, Employment Reports on Veterans (SEP 2010) (38 U.S.C. 4212).
- 13) 52.222-50, Combating Trafficking in Persons (Feb 2009)
- 14) 52.223-18, Encouraging Contractor Policies to Ban Text Messaging While Driving (AUG 2011)

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- 15) 52.225-3, Buy American Act—Free Trade Agreements—Israeli Trade Act  
(Nov 2012)
- 16) 52.225-13, Restrictions on Certain Foreign Purchases (June 2008)
- 17) 52.233-3, Protest After Award (AUG 1996)
- 18) 52.233-4, Applicable Law for Breach of Contract Claim (OCT 2004)

The FAR may be obtained via the Internet at URL:  
<http://www.acquisition.gov/far/index.html>

The NFS may be obtained via the Internet at URL:  
<http://www.hq.nasa.gov/office/procurement/regs/nfstoc.htm>

All contractual and technical questions must be in writing via e-mail to Jeffrey Hoyt at [Jeffrey.D.Hoyt@nasa.gov](mailto:Jeffrey.D.Hoyt@nasa.gov) not later than 01/11/2013 at 12 pm local GRC time. Telephone questions will not be accepted.

This procurement is for the purchase of 2 C-Band Solid State Power Amplifiers, with the option to purchase up to 6 additional amplifiers. For quote evaluation purposes, the Government will evaluate offers for award purposes by adding the total price for ALL options to the total price for the basic requirement. The Government may determine that an offer is unacceptable if the option prices are significantly unbalanced. Evaluation of options shall not obligate the Government to exercise the options.

Selection and award will be made to that offeror whose offer will be most advantageous to the Government, with consideration given to the factors of proposed technical merit, price, better value features and past performance. This means that award will be conducted on a BEST VALUE basis. It is critical that offerors provide adequate detail to allow evaluation of their offer. (SEE FAR 52.212-1(b)).

The following factors will be used to evaluate offerors:

- 1) Price/Cost – The ability of the offeror to provide a fair and reasonable price.
- 2) Technical Merit – The ability of the offeror to successfully meet all Basic Specifications, warranty and delivery requirements. An offeror who is able to exceed any of these features may be rated higher.
- 3) Past Performance – The ability of the offeror to show their relative past performance, preferably 5 years or more, in manufacturing fielded amplifiers of a similar type. This past performance should include a history of

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manufacturing multiple converters for multiple professional organizations. References are appreciated.

- 4) Better value features – These following features are considered ‘Better Value Features’ and are performance goals that go above and beyond what the Government is minimally asking for. These better value features are in no particular order of importance and are all of equal value. Offerors who do *not* provide these better value features will *not* be rated negatively for failing to provide them. However, offerors who *do* meet or exceed the better value features *can* be rated more favorably than those who do not:
  1. **Flatness:**  $< \pm 1$  dB over any 50 MHz band
  2. **P1dB (1 dB gain compression point):** +53 dBm minimum
  3. **Third-order intermodulation distortion**  $< -30$  dBc at 100 W output
  4. **Harmonics:**  $< -20$  dBc at rated at 100 W output
  5. **Output VSWR:** 1.8:1 max
  6. **Gain stability:**  $< \pm 1$  dB over a four-hour interval, after one hour warm up
  7. **Delivery:** Delivery earlier than 90 days ARO.
  8. **Warranty:** Extended warranty (I took out 3 years, I think we should let companies propose whatever they feel appropriate for them, be it more or less than 3 additional years. If you feel strongly on the 3 years text, you can put back in).

The offeror should consider derating a higher-power device in order to provide the desired distortion performance.

Offerors must include completed copies of the provision at 52.212-3 (DEC 2012), Offeror Representations and Certifications - Commercial Items with their offer. The provision may be obtained via the internet at URL: [http://farsite.hill.af.mil/reghtml/regs/far2afmcfars/fardfars/far/52\\_000.htm](http://farsite.hill.af.mil/reghtml/regs/far2afmcfars/fardfars/far/52_000.htm). These representations and certifications will be incorporated by reference in any resultant contract.

NASA Clause 1852.215-84 (NOV 2011), Ombudsman, is applicable. The Center Ombudsman for this acquisition can be found at [http://prod.nais.nasa.gov/pub/pub\\_library/Omb.html](http://prod.nais.nasa.gov/pub/pub_library/Omb.html).

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Prospective offerors shall notify this office of their intent to submit an offer. It is the offeror's responsibility to monitor the following Internet site for the release of solicitation amendments (if any): <http://prod.nais.nasa.gov/cgi-bin/eps/bizops.cgi?gr=D&pin=22> . Potential offerors will be responsible for downloading their own copy of this combination synopsis/solicitation and amendments (if any).

Any referenced notes may be viewed at the following URLs linked below.

**Statement of Work**  
**C-Band Solid State Power Amplifiers**

**Basic Specifications – Must meet**

- frequency range: 5060 - 5150 MHz
- gain: 20 dB minimum
- output power: 100 W minimum
- input/output impedance: 50 ohms
- 19" Rack Mount, maximum depth 20" (from front panel, but including rear connectors)
- all RF connectors: type N female, front panel
- operating temperature: -10 to +50 C, in an enclosure
- storage temperature: -50 to +100 C
- remote control and monitoring: USB, ethernet or RS232 (9 pin female) power output (in Watts or dBm), internal temperature, faults
- prime power: 120 VAC (nominal) 50/60Hz, single phase
- front panel RF output power indication
- front panel AC power control and indication
- air cooled, by internal fan (if required) rear or front only
- must tolerate continuous as well as time-division multiplex operation (with Transmit/Receive switched input)
- 40 dB coupled port with N-female connector on front panel

**Better value features – Desired Performance Goals**

- flatness:  $< \pm 1$  dB over any 50 MHz band
- P1dB (1 dB gain compression point): +53 dBm minimum

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- third-order intermodulation distortion  $< -30$  dBc at 100 W output
- harmonics:  $< -20$  dBc at rated at 100 W output
- output VSWR: 1.8:1 max
- gain stability:  $< \pm 1$  dB over a four-hour interval, after one hour warm up
- Early delivery of amplifiers
- Extended warranty (longer than 1 year).

**Warranty**

One year, parts and labor (see above).

**Past Performance**

The offeror should show its relative past performance, preferably of 5 years or more, in manufacturing fielded amplifiers of a similar type. This past performance should include a history of manufacturing multiple converters for multiple professional organizations. References are appreciated.

**Delivery**

All amplifiers shall be delivered to NASA GRC no later than 90 days ARO. Earlier delivery is desirable (see above).